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6 SELECTION OF QUALIFIED ARMY ENLISTEES:

ANALYSIS OF CHARACTERISTICS OF SOLDIERS
SEPARATED UNDER TRADOC REGULATION 635-1.

by

10 Richard J. Orend, Kenneth W. Stroad, Jr. and
Theodore H. Rosen
Human Resources Research Organization

M. A. Fischl, Work Unit Leader, ARI

9 *Technical rept.*

Ralph R. Canter, Technical Area Chief
Personnel Accession and Utilization Technical Area, ARI

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U. S. ARMY RESEARCH INSTITUTE

FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the
Deputy Chief of Staff for Personnel

J. E. UHLANER
Technical Director

W. C. MAUS
COL, GS
Commander

NOTICES

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Ralph R. Canter, Technical Area Chief
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Management Brief

The Trainee Discharge Program (TDP), TRADOC Regulation 635-1, was implemented by the Army on 1 September 1973. It was designed to facilitate the early elimination of enlisted trainees who show themselves to be poor or marginal in terms of their performance or their adjustment to Army life.

Data on 238 dischargees and on 63 trainees successfully completing Basic Combat Training were obtained from each man by questionnaire and personal interview, and the two groups were compared on a number of dimensions.

In addition, comparisons were made between two subgroups of dischargees, Regular Army (128 cases) and Reserve (110 cases). Each of these was also compared with the successful (non-dischargee) group.

The research focuses on two specific questions: (1) Is there information in the background of an individual soldier who fails (Reservist or RA), which will distinguish him from an individual who succeeds? and (2) What effect is produced on the post-military lifestyle of an individual who returns home after being in the Army for a brief period (less than 180 days)?

In response to the first question, the discharged soldier seemed to differ from the successful soldier in several ways: The dischargee had more difficulty in school, complained more of boring civilian jobs, and was more likely to have been dissatisfied with civilian life.

Comparisons between the discharged Reservist and the discharged RA soldier indicated that the Reservist was more family-oriented, more satisfied with civilian life, had more difficulty in school, and was more concerned about personal injuries during training. The Reservist was less likely to have been involved in shoplifting and in marijuana use and more likely to have been discharged for lack of aptitude. The RA dischargee was separated more frequently for lack of self-discipline or for attitudinal reasons.

In response to the second question, no significant amount of change appeared in any direction in the life style of individuals in the Army less than 180 days. For most categories, "no change" was the most frequent response, with fewer individuals indicating positive or negative changes. However, a noteworthy, although deplorable change appeared in the category of arrest records: 46% of the dischargees reported more arrests after discharge than before enlistment, and 41% reported fewer.

ANALYSIS OF CHARACTERISTICS OF SOLDIERS SEPARATED UNDER TRADOC
REGULATION 635-1

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INTRODUCTION

The U.S. Army Trainee Discharge Program (TDP) was designed to eliminate marginal or poor performers from the Army at a minimum cost to the Army and to the individual.

An evaluation of this program gives rise to two kinds of questions, one concerning the effect of the program on the Army and the other concerning the effect of the Army on the individual.

This paper is directed at two specific questions, one from each of the more general areas. They are:

(1) In the backgrounds of individuals who fail, is there information which will distinguish them from those who succeed? and

(2) What is the effect of being in the Army less than 180 days on the life-styles of the eliminated individuals?

An answer to the first question will help the Army make improved decisions about selection of enlistees, thus saving both time and money.

The question will be examined by using data on a selected group of TDP dischargees and a corresponding sample of enlistees not discharged prior to 180 days of service.

Specifically, a comparison between dischargees and non-dischargees will be made on available variables. These include demographics, socio-economic status, and personal background information.

An additional breakdown of the sample into Regular Army (RA's) and Reserve Component (Reserve) dischargees will be made to determine background differences between these groups.

The second question is directed at effects of the Army experience on the individual, with the specific concern of impact on a dischargee's life-style. Two issues will be examined in this context: first, are there significant differences between before and after life-styles characteristic of dischargees, i.e., working situation, satisfaction, legal problems, etc.?

Second, does the individual's desire to leave the Army affect his post-service adjustment, i.e., do those who wanted the discharge behave differently after being discharged than those who wanted to stay in the Army?

Again, RA-Reserve status will be used as a control variable in this analysis.

METHODOLOGY

Because of the small N's (238 dischargees and 63 control), simple cross-tabulations were used to examine the effect of each independent variable. The large number of tables generated in this process necessitates the use a stringent-cut off point for the significance tests used. Thus, only those tables showing a significance level of $p \leq .01$* were included. These analyses are reported in Section I and II.

In Section III, the impact of the Army experience on a number of different variables will be analyzed from two perspectives:

(1) which variables show important changes over all subjects from the pre-Army period to the post-Army period and

(2) how many individuals show a pattern of change versus a pattern of stability over a number of variables.

Because of the small number of complete cases, individuals who answered both the pre- and post-Army versions of the questions, the sophisticated multivariate statistical techniques required for a complete analysis of these data were not possible.

Instead, some basic elements of this analysis were used to evaluate available data. For each subject, nine before-and-after questions were examined to determine if the subject improved his position, stayed the same, or experienced a decrease in each area.

This procedure allowed an examination of the distribution of changes in each variable, over all subjects, and an examination of different patterns of changes among individuals. The small N did not allow tests for statistical significance or distribution based on other techniques, e.g., cluster analysis.

THE DATA

The sample of dischargees and the control group were developed by the Bendix Corporation; detailed descriptions are contained in previously-published reports on these data.** Questionnaires were developed and administered by Bendix.

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*Tests of significance include Chi square, adjusted Chi square, and Fisher's Exact Test, depending on the N.

**Ronald G. Bauer, et al. Evaluation of Early Enlistment Failures Under the U. S. Army Trainee Discharge Program. Alexandria, VA: Army Research Institute Technical Report TR 75-B1, November 1975.

SECTION I. A COMPARISON OF REGULAR ARMY DISCHARGEES, RESERVE COMPONENT DISCHARGEES, AND NON-DISCHARGEES*

Each of the three basic groups in this analysis is compared on all variables for which data are available. Following is a report of those instances in which RA and Reserve dischargees were significantly different from each other as well as (in the aggregate form) from non-dischargees.

Schoolwork

Table 1 shows differences between dischargees and non-dischargees on the question of having difficulty with schoolwork. The non-dischargees reported far less extent of difficulty than did the dischargees.

There are also substantial differences between RA dischargees (less difficulty) and Reserve dischargees (more difficulty). The pattern is toward greater difficulty from non-dischargees to RA dischargees to Reserve dischargees.

Interesting Jobs

Table 2 again shows large differences between dischargees and non-dischargees, with somewhat smaller differences among the dischargee categories. Non-dischargees are less likely to have found their civilian jobs boring than either of the other groups.

Among dischargees, Reserves are somewhat less likely to have found their jobs boring than RA's. However, despite the high significance level, the measure of predictive association (Lamba) is very low.

Family Relations

In Table 3 there is a somewhat different pattern. Reserve dischargees are most likely to have perceived their parents as happy together, followed by non-dischargees, and finally by RA dischargees. Similar patterns are exhibited on several other "family" variables

Thus, Table 4 shows Reserve dischargees least likely to have argued with parents; Table 5 shows Reserves most likely to help their families; Table 6 shows them as less likely to have run away from home than RA's (although not less likely than non-dischargees); and Table 7 indicates that Reserves are less likely to stay out later than their parents wanted them to.

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*Data on the RA-Reserve status of non-dischargees were not available.

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Table 1. School Work Difficulty, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Had difficulty with school work	38.3% (49)	54.5% (60)	19.0% (12)	40.2% (121)
Had no difficulty with school work	61.7% (79)	45.5% (50)	81.0% (51)	59.8% (180)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 21.33823   p<0.01
Contingency Coefficient = 0.25729
Lambda (asymmetric) = 0.06358 with Discharge Category as dependent variable

Table 2. Held Boring Jobs, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Held Boring Jobs	41.4% (53)	32.7% (36)	14.3% (9)	32.6% (98)
Did not hold Boring Jobs	54.7% (70)	61.8% (68)	81.0% (51)	62.8% (189)
Missing Data	3.9% (5)	5.5% (6)	4.8% (3)	4.7% (14)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 14.51102   p = 0.0058
Contingency Coefficient = 0.21446
Lambda (asymmetric) = 0.00578 with Discharge Category as dependent variable

Table 3. Perception of Parents' Happiness, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Parents Happy	71.1% (91)	80.0% (88)	77.8% (49)	75.7% (228)
Parents Unhappy	25.0% (32)	10.0% (11)	17.5% (11)	17.9% (54)
Missing Data	3.9% (5)	10.0% (11)	4.8% (3)	6.3% (19)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 11.87634   p = 0.0183
Contingency Coefficient = 0.19483
Lambda (asymmetric) = 0.03468 with Discharge Category as dependent variable

Table 4. Argued with Parents, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Once	6.3% (8)	11.8% (13)	9.5% (6)	9.0% (27)
Twice	10.2% (13)	8.2% (9)	6.3% (4)	8.6% (26)
Three or Four Times	5.5% (7)	9.1% (10)	6.3% (4)	7.0% (21)
Five or More Times	53.1% (68)	28.2% (31)	47.6% (30)	42.9% (129)
Never	25.0% (32)	42.7% (47)	30.2% (19)	32.6% (98)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 18.84059   p = 0.0157
Contingency Coefficient = 0.24271
Lambda (asymmetric) = 0.1329 with Discharge Category as dependent variable

Table 5. Had to Help Family, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Often	32.0% (41)	42.7% (47)	27.0% (17)	34.9% (105)
Seldom or Never	68.0% (87)	57.3% (63)	68.3% (43)	64.1% (193)
Missing Data	0.0% (0)	0.0% (0)	4.8% (3)	1.0% (3)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 15.96681   p = 0.0031
Contingency Coefficient = 0.22444
Lambda (asymmetric) = 0.05202 with Discharge Category as dependent variable

Table 6. Ran Away From Home, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Never	57.0% (73)	72.7% (80)	76.2% (48)	66.8% (201)
Once	21.1% (27)	12.7% (14)	19.0% (12)	17.6% (53)
Twice	14.8% (19)	5.5% (6)	3.2% (2)	9.0% (27)
Three or Four Times	3.0% (5)	4.5% (5)	1.6% (1)	3.7% (11)
Five or More Times	3.0% (4)	4.5% (5)	0.0% (0)	3.0% (9)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 18.26233   p = 0.0193
Contingency Coefficient = 0.23917
Lambda (asymmetric) = 0.04624 with Discharge Category as dependent variable

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Table 7: **Staying** Out Late, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Once	1.6% (2)	5.5% (6)	4.8% (3)	3.7% (11)
Twice	5.5% (7)	7.3% (8)	4.8% (3)	6.0% (18)
Three or Four Times	6.3% (8)	8.2% (9)	19.0% (12)	9.6% (18)
Five or More Times	70.3% (90)	55.5% (61)	65.1% (41)	63.8% (192)
Never	16.4% (21)	23.6% (26)	6.3% (4)	16.9% (51)
	100.0% (128)	100.0% (110)	100.0 (63)	100.0% (301)

Chi Square = 19.91747   p = 0.0105
Contingency Coefficient = 0.24942
Lambda (asymmetric) = 0.08092 with Discharge Category as dependent variable

The Reserve dischargees seem more likely to exhibit a strong family orientation than either of the other groups.

An attempt was made to determine if this pattern held up for a collapsed scale of family orientation variables. But the Chi Square did not meet our criterion for inclusion (the significance level was .03), despite a tendency in that direction.

Satisfaction with Civilian Life

Another attribute on which the Reserves were somewhat more stable was satisfaction with civilian life. Table 8 shows that Reserves were significantly more likely to be satisfied with civilian life.

This response is expected because they did not choose the full-time Army alternative. It may also indicate a different motivational structure for Reserves and RA's.

Stealing

Table 9 presents the response distribution of the item asking how often the respondent has taken something from a store without paying for it. The results indicate that the lowest frequency of dishonest behavior among the Reserve dischargees and the highest among the non-dischargees.

These findings appear to parallel those of stronger family orientation among the Reserve dischargees, although it is equally possible that the Reservists were merely less candid in their reponses.

Civilian Marijuana Use

Subjects were asked to report the frequency of their use of marijuana prior to entering the service. These results are presented in Table 10. Once again, the pattern appears of highest use among non-dischargees, lower among RA dischargees, and lowest among Reserve dischargees. Once again, though, one cannot dismiss the possibility that the groups were differentially candid in their responses.

Worries over Training Injuries

Differences were noted among the three groups on their extent of reported worries about injuries during training (Table 11). The Reserve dischargees most often reported frequent or occasional worries about injuries. The RA personnel reported far fewer worries.

Table 8. Life Satisfaction, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Satisfied	49.2% (63)	68.2% (75)	54.0% (34)	57.1% (172)
Neither Satisfied nor Dissatisfied	10.9% (14)	6.4% (7)	36.5% (23)	14.6% (44)
Dissatisfied	39.8% (51)	25.5% (28)	9.5% (6)	28.2% (85)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 45.0483 $p < 0.01$
Contingency Coefficient - 0.36080
Lambda (asymmetric) = 0.12139 with Discharge Category as dependent variable

Table 9. Taking Something from a Store, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Never	43.0% (55)	52.7% (58)	27.0% (17)	43.2% (130)
Once	13.3% (17)	19.1% (21)	22.2% (14)	17.3% (52)
Twice	12.5% (16)	13.6% (15)	14.3% (9)	13.3% (40)
Three or Four Times	7.0% (9)	1.8% (2)	11.1% (7)	6.0% (18)
Five or More Times	24.2% (31)	12.7% (14)	25.4% (16)	20.3% (61)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 19.63667   p = 0.0118
Contingency Coefficient = 0.24747
Lambda (asymmetric) = 0.040406 with Discharge Category as dependent variable

Table 10. Marijuana Use, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Never	41.4% (53)	53.6% (59)	33.3% (21)	44.2% (133)
One Time Only	14.8% (19)	10.0% (11)	4.8% (3)	11.0% (33)
Once or Twice a Year	3.1% (4)	3.6% (4)	3.2% (2)	3.3% (10)
Three to Ten Times a Year	0.8% (1)	2.7% (3)	12.7% (8)	4.0% (12)
Once or Twice a Month	7.0% (9)	5.5% (6)	7.9% (5)	6.6% (20)
Once or Twice a Week	13.3% (17)	10.9% (12)	15.9% (10)	13.0% (39)
Daily	19.5% (25)	13.6% (15)	22.2% (14)	17.9% (54)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0% (301)

Chi Square = 27.13057   p = 0.0074
Contingency Coefficient = 0.28755
Lambda (asymmetric) = 0.07514 with Discharge Category as dependent variable

Table 11. Training Injury Worries, by Discharge Category

	RA Dischargee	Reserve Dischargee	Non-Dischargee	
Very Often Worried About Injuries	11.7% (15)	23.6% (26)	6.3% (4)	15.0% (45)
Occasionally Worried About Injuries	11.7% (15)	18.2% (20)	19.0% (12)	15.6% (47)
Seldom Worried About Injuries	26.6% (34)	14.5% (16)	38.1% (24)	24.6% (74)
Never Worried About Injuries	50.0% (64)	43.6% (48)	36.5% (23)	44.9% (135)
	100.0% (128)	100.0% (110)	100.0% (63)	100.0%)301)

Chi Square = 22.90808   p = 0.0008
Contingency Coefficient = 0.26594
Lambda (asymmetric) = 0.09249 with Discharge Category as dependent variable

Differences between RA dischargees and non-dischargees were very slight and non-significant. The pattern of these responses suggests a difference between the Reserve personnel or the Reserve environment and those of the Regular Army, rather than suggesting a reason for discharge.

Reasons for Discharge

The RA and Reserve dischargees were then compared on their reasons for discharge (Table 12). The most significant findings were the much higher incidence of aptitude as a reason for discharge among the Reservists, and self-discipline among the RA dischargees.

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Table 12. Reason for Discharge, by Discharge Category

	RA Dischargee	Reserve Dischargee	
Attitude	37.4% (46)	32.7% (32)	35.3% (78)
Aptitude	14.6% (18)	35.7% (35)	24.0% (53)
Motivation	22.0% (27)	21.4% (21)	21.7% (48)
Self-Discipline	26.0% (32)	10.2% (10)	19.0% (42)
	100.0% (123)	100.0% (98)	100.0% (221)

Chi Square = 17.64   p = 0.000523
Contingency Coefficient = 0.66891
Lambda (asymmetric) = 0.43353 with Discharge Category as dependent variable

Other reasons (attitude, motivation) are quite similarly distributed. A probable explanation is the lower selection criteria for reservists, who were more frequently discharged for aptitude reasons. (A comparison of the distributions of these data after removing the "aptitude" responses reveals that the differences are not significant.) This conclusion is supported by Table 13, which shows significantly lower aptitude scores for the Reserve dischargees than for the RA dischargees.

Another way to view this is to pool all non-aptitude reasons for comparison with aptitude reasons. In such a comparison RA dischargees were separated for non-aptitude reasons over aptitude reasons in a 5:1 ratio, while for Reservists this was only a 2:1 ratio.

SECTION II. COMPARISON OF VOLUNTARY AND INVOLUNTARY DISCHARGEES

Dischargees were asked if their dismissal from the Army was with their consent or contrary to their wishes. Sixty-three percent said they wanted to be discharged, and 33% did not want to be discharged. (Four percent were undecided.)

One possible implication of this question is that those leaving are somehow different, either in their background or in the activities they pursue upon leaving the Army. This possibility was tested by comparing the "voluntary" and "involuntary" dischargees across a number of background and post-Army activities.*

The variables selected parallel those used in the before-and after analysis discussed above. In addition, analyses were again conducted with RA-Reserve as a control variable.

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*Variables tested include: (1) Permanent or temporary job prior to entry; (2) earnings prior to entry; (3) job satisfaction prior to entry; (4) school enrollment prior to entry; (5) financial problems prior to entry; (6) living conditions prior to entry; (7) parental problems prior to entry; (8) arrests prior to entry; (9) satisfaction with civilian life prior to entry; (10) job status at enlistment; (11) job status after discharge; (12) hours per week work after discharge; (13) permanent or temporary job after discharge; (14) earnings after discharge; (15) job satisfaction after discharge; (16) school enrollment after discharge; and (17) arrests after discharge.

Table 13. Three or More Aptitude Area Scores Above 90
(ACB Code , by Discharge Category

	RA Dischargee	Reserve Dischargee	
Yes	96.7% (89)	84.4% (38)	92.7% (127)
No	3.3% (3)	15.6% (7)	7.3% (10)
	100.0% (92)	100.0% (45)	100.0% (137)

Chi Square = 6.75   p = 0.009371
Contingency Coefficient = 0.49370
Lambda (asymmetric) = 0.19075 with Discharge Category as dependent variable

These analyses produced three significant results, all of which were for Reserve dischargees. Table 14 shows that "voluntary" dischargees were significantly less likely to have had financial problems prior to service entry than were "involuntary" dischargees.

Similarly, "voluntary" dischargees were significantly more likely to be satisfied with their lives prior to entry than "involuntary" dischargees (Table 15). These results suggest that the natural tendency for individuals who had fewer problems in civilian life is to be less inclined to want to remain in an "unhappy" situation.

The fact that these results are not reflected in other similar life condition variables is somewhat surprising. Also, since no significant difference is seen between RA's and Reserves on the "voluntary-involuntary" question, it is noteworthy that the results were not replicated for Regular Army dischargees.

The third significant finding (Table 16) shows Desire to be Discharged as significantly related to Living Arrangements Prior to Entry. The large number of categories made this fairly difficult to interpret. Also, the fact that the value of Lambda is 0.0 demonstrates that the statistical significance is not indicative of useful results.

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Table 14. Desire to be Discharged, by Financial Problems
(Reserve Dischargees)

Financial Problems Prior to Entry

	Yes	No	
Voluntary	25.4% (17)	74.6% (50)	100% 67
Undecided	50.5% (1)	50.0% (1)	100% 2
Involuntary	53.7% (22)	46.3% (19)	100% 41
	40	70	110

Chi Square = 8.95769   p = 0.0113
Contingency Coefficient = 0.27441
Lambda (asymmetric) = 0.11628 with Desire to Be Discharged as the dependent variable

Table 15. Desire to be Discharged, by Satisfaction with Life
Prior to Service (Reserve Dischargees)

	Satisfied	Undecided	Dissatisfied	
Voluntary	79.1% 53)	7.5% (5)	13.4% (9)	60.9% (67)
Undecided	100.0% (2)	0.0% (0)	0.0% (0)	100.0% (2)
Involuntary	48.8% (20)	4.9% (2)	46.3% (19)	37.3% (41)
	75	7	28	110 100.0%

Chi Square = 15.46951   p = 0.0038
Contingency Coefficient = 0.35113
Lambda (asymmetric) = 0.23256 with Desire to be Discharged as the dependent variable

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Table 16: Desire to be Discharged, by Living Arrangements Prior to Entry
(Reserve Dischargees)

	Living with Parents	Living with other Relatives	Living with Wife	Living with Friends	Living Alone	Living with Inlaws	Other	
Voluntary	71.6% (48)	4.5% (3)	11.9% (8)	1.5% (1)	4.5% (3)	3.0% (2)	3.0% (2)	60.9% (67)
Undecided	50.0% (1)	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	1.8% (2)
Involuntary	70.7% (29)	7.3% (3)	19.5% (8)	0.0% (0)	0.0% (0)	0.0% (0)	2.4% (1)	37.3% (41)
	78	6	16	2	3	2	3	110 100.0%

Chi Square = 31.52765   p = 0.0016
Contingency Coefficient = 0.47198
Lambda (asymmetric) = 0.0 with Desire to be Discharged as the dependent variable

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SECTION III.   THE IMPACT OF ARMY SERVICE

The second major question raised in this report is how a brief stay in the Army impacted the lifestyles of dischargees. Nine areas for which data were available on both pre-Army and post-Army situations were compared for all subjects.*

These areas are: (1) presence or absence of supervisory responsibility; (2) number of hours worked per week; (3) permanent versus temporary job status; (4) salary; (5) job satisfaction; (6) enrollment in school or training program; (7) arrest record; (8) Duncan Socio-Economic Work Index Score; and (9) living situation changes.

Each dischargee was compared on all nine variables as he responded to them for pre- and post-Army conditions. The results were analyzed for question differences and for individual differences. The questions were evaluated in terms of the degree to which there was change and, where possible, the direction of that change.**

Thus, for items 1 through 5, 7, and 8, an evaluation as to whether the dischargee was better or worse off after his Army experience was included in the analysis. Item results will be discussed first, individual distributions second.

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*"All subjects" refers to those for whom data was available on both pre-Army and post-Army conditions on each question. This requirement severely limited the number of respondents and also restricted the analyses which could be performed. The basic number of comparisons for all nine variables is 76. A table indicating individual responses to each item is contained in Appendix B. Subjects who did not respond in at least six areas are not included.

**Missing data caused significant problems. In the calculation of results for changes on items, dischargees were included if the individual responded to six or more items. Actually, the pattern of response showed 76 individuals (of 238) who fit those requirements. All others responded to either two or three of the items. This rather regular pattern raises some question about the method of data collection, but we are not able to answer this question on the basis of available information.

A total of 626 possible changes for the dischargees are included in this analysis. Of these, 222 actually occurred, approximately one-third. Similarly, there were 475 changes to which we could assign some valence, positive or negative shift.*

Of these changes, only 107 took place. Considering the timeframe in which the changes occurred, generally three to six months, this does not seem to be an inordinate number of changes across nine areas for a group of men such as these.

Table 17 shows the item by item breakdown. Among other interesting aspects of this table are the following:

1. Arrest record shows the most total change, followed by the Duncan Index and salary. All other variables have less than 50% change.

2. Presence of supervisory responsibility shows the least change (probably because of low initial variance). It is followed by living situation, permanent-temporary job status, and job satisfaction.

These results indicate that about three-quarters of the dischargees were likely to return to the same, or very similar, living and working conditions after discharge as they were in before entry into the Army.

3. Income, arrest record, and the Duncan Work Index show the greatest amount of positive change, that is, they were most likely to increase after discharge. More than one-third of all reporting subjects had increase in these areas.

On the other hand, these same variables were also most likely to show negative change. With the exception of arrest record, however, the negative change was much smaller than the positive change.

5. Salary and the Duncan Work Index have the largest positive ratios of change, i.e., greatest margin of positive over negative changes (10% and 20% respectively).

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*The variables to which a valence was assigned include the following: (1) presence or absence of supervisory responsibility--+1 if present after but not before, 0 if the same in both time frames, and -1 if present before, but not after; (2) number of hours worked per week--+1 if after was great, 0 if the same, -1 if before was greater; (3) permanent-temporary job status--+1 if after permanent and before temporary, 0 if the same, -1 if after temporary and before permanent; (4) salary--+1 if after higher, 0 if equal, -1 if before greater; (5) job satisfaction--+1 if after greater (three-point scale), 0 if equal, -1 if before greater; (7) arrest record--+1 if arrested before but not after, 0 if the same, -1 if arrested after but not before; and (8) Duncan Socio-Economic Work Index Score--+1 if higher after, 0 if equal, -1 if higher before.

Table 17. Variable by Direction of Change

Direction of Change	Super-visory Respon-sibility	Hours Worked Per Week	Permanent Job Status	Salary	Job Satis-faction	Enroll-ment in School	Arrest Record	Duncan Index Score	Living Situation
Positive Change	3.0% (2)	18.0% (14)	12.0% (9)	34.0% (26)	15.0% (12)	0.0% (0)	41.0% (32)	41.0% (32)	0.0% (0)
No Change	85.0% (66)	69.0% (54)	72.0% (56)	45.0% (39)	71.0% (55)	74.0% (176)	13.0% (10)	38.0% (30)	77.0% (183)
Negative Change	13.0% (10)	13.0% (10)	16.0% (13)	21.0% (16)	14.0% (11)	26.0% (61)	46.0% (36)	21.0% (16)	26.0% (54)
Neutral Change	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
TOTAL	78	78	78	78	78	237	78	78	237

In fact, only arrest record shows a greater than 21% negative change. Thus, the observation about little change for the length of time being considered seems to apply even more strongly to negative change on the variables.

6. The negative to positive ratio favors poorer changes for three variables (supervisory responsibility, permanent-temporary job, and arrests).

The first two exhibit small changes, generally with the highest value equal to 16% negative change. Arrests is the most unstable variable with highest change positive or negative.

Individual changes for each subject are listed in Table 18, by the breakdown of the number of changes for individuals. The mean number of changes is 2.92. Only eight dischargees experienced no changes, while only three had more than five.

Table 18 does not show negative and positive changes but seems again to demonstrate the relatively small number of changes associated with a relatively long timeframe and a change in job.

Table 19 is designed to show positive and negative changes for those variables for which direction could be determined. The breakdown provided is for net change, i.e., the total positive less the total negative changes.

The two variables for which direction could not be determined were not included in this table. In a collapsed form (the far right-hand column of Table 19) the net changes fall into three roughly equal groups of positive, zero, and negative change.

Thus, overall, about two-thirds of the dischargees experienced a composite positive or neutral change. On the other hand, about one-third experienced a net negative change over the period they spent in the Army.*

Another way to view the same data is to determine the number of dischargees who experienced any negative changes after leaving the Army. Of 76 dischargees with useful data, 47 had at least one negative change.

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*The variables are equally weighted in these analyses. If one variable were really more important to dischargees, its significance would not show up in the analysis. Since we had no means of determining relative importance, this potentially useful information will have to be left to future research. Our findings should be interpreted with this problem in mind.

Table 18. Total Changes in Lifestyle for Individuals

Number of Changes	Number of Individuals
0	8
1	10
2	11
3	17
4	15
5	12
6	2
7	1
8	0
9	0
TOTAL	76

Table 19. Net Changes in Lifestyle for Individuals

Number of Net Changes		Number of Individuals	Percent of Individuals
Positive Changes:	5	1	1%
	4	4	5%
	3	5	7%
	2	11	15%
	1	9	12%
No change	0	22	30%
Negative Changes	-1	14	18%
	-2	7	9%
	-3	1	1%
	-4	1	1%
	-5	1	1%
	Total	76	100%

Again, any interpretation of the impact of Army service on their change or the likelihood of similar changes occurring even without Army service is problematic.

In addition, a large number of dischargees were without jobs at the time of the interview. Many of these people are not in this sample, which could bias the results.

Further analyses of these data seem unprofitable due to the small N and large amounts of missing information from the original sample of 238 dischargees. However, if such analyses were to be performed on better data, some very useful results might be obtained.

For example, a cluster analysis of dischargees over these and other useful behavior variables would produce groups with similar patterns. Performance data then could be compared to determine possibility of increasing our ability to predict behavior from patterns, as well as to study Army impact on a dischargee's lifestyle.

The same kind of approach could be used on before-only information to help increase predictive capabilities. Unfortunately, the quality of the data available here would not permit the use of such a multivariate approach.

APPENDIX A

TABLES ON RESERVE COMPONENT VERSUS REGULAR ARMY AND EDUCATION/MENTAL CATEGORY

Table A-1: AFQT Scores by Discharge Category (High School Graduates and Non-Graduates)

	RA Dischargees (Graduates)	Reserve Dischargees	
Lowest Quartile (AFQT)	15.7% (13)	26.9% (7)	18.3% (20)
Second Quartile (AFQT)	19.3% (16)	15.4% (4)	18.3 (20)
Third Quartile (AFQT)	33.7% (28)	8.8% (1)	26.8% (29)
Highest Quartile (AFQT)	31.3% (26)	53.8% (14)	36.7% (40)
	83	26	100.0% 109

Chi Square = 10.91558   p = 0.0122
Contingency Coefficient = 0.30171
Lambda (asymmetric) = 0.0 with Discharge Category as dependent variable

	RA Dischargees	Reserve Dischargees (Non-Graduates)	
Lowest Quartile (AFQT)	12.2% (5)	44.4% (31)	32.4% (38)
Second Quartile (AFQT)	36.6% (15)	27.1% (19)	30.6% (34)
Third Quartile (AFQT)	34.1% (14)	15.7% (11)	22.5% (25)
Highest Quartile (AFQT)	17.1% (7)	12.9% (9)	14.4% (16)
	41	70	100.0% 111

Chi Square = 13.18152   p = 0.0043
Contingency Coefficient = 0.32580
Lambda (asymmetric) = 0.07317 with Discharge Category as dependent variable

Table A-2: Education by Discharge Category
(AFQT Lowest Quartile)

	RA Dischargees	Reserve Dischargees	
8th Grade	11.1% (2)	7.9% (3)	8.9% (5)
9th Grade	11.1% (2)	23.7% (9)	19.8% (11)
10th Grade	5.8% (1)	10.5% (4)	8.9% (5)
11th Grade	0.0% (0)	39.5% (15)	26.8% (15)
12th Grade	72.2% (13)	15.8% (6)	33.9% (19)
Some College	0.0% (0)	2.6% (1)	1.8% (1)
	18	38	100.0% (56)

Chi Square = 20.50620   p = 0.0010
Contingency Coefficient = 0.51772
Lambda (asymmetric) = 0.38889 with Discharge Category as dependent variable

Table A-3: Education by Discharge Category
(AFQT Second Quartile)

	RA Dischargees	Reserve Dischargees	
7th Grade	0.0% (0)	17.4% (4)	7.4% (4)
8th Grade	0.0% (0)	13.0% (3)	5.6% (3)
9th Grade	6.5% (2)	21.7% (5)	13.0% (7)
10th Grade	12.9% (4)	8.7% (2)	11.1% (6)
11th Grade	29.0% (9)	21.7% (5)	25.9% (14)
12th Grade	48.4% (15)	17.4% (4)	35.2% (19)
Some College	3.2% (1)	0.0% (0)	1.9% (1)
	31	23	100.0% (54)

Chi Square = 16.84375   p = 0.0107
Contingency Coefficient = 0.48539
Lambda (asymmetric) = 0.43478 with Discharge Category as dependent variable

Table A-4: Education by Discharge Category
(AFQT Third Quartile)

	RA Dischargees	Reserve Dischargees	
Missing Data	0.0% (0)	7.7% (1)	1.8% (1)
8th Grade	0.0% (0)	30.8% (4)	7.3% (4)
9th Grade	4.8% (2)	23.1% (3)	9.1% (5)
10th Grade	7.1% (3)	30.8% (4)	12.7% (7)
11th Grade	21.4% (9)	0.0% (0)	16.4% (9)
12th Grade	66.7% (28)	7.7% (1)	52.7% (29)
	42	13	100.0% (55)

Chi Square = 33.50471   p<0.01
Contingency Coefficient = 0.61528
Lambda (asymmetric) = 0.53848 with Discharge Category as dependent variable

INDIVIDUAL CHANGES IN SELECTED VARIABLES BEFORE ENTRY AND AFTER LEAVING THE ARMY

	Worked as Supervisor	# Hrs. Worked per Week	Permanent or Temporary	$ Earned per Week	Satisfied or Dissatisfied	In School	Arrested	Type of Work: Duncan Socio-Economic Index Scale	Living with Before Enlistment	Number	Changes	+ - Score
1.	0	0	0	0	0	1	-1	+1	0	9	3	0
2.	0	0	0	0	0	0	**	0	0	8	0	0
3.	-1	0	0	0	0	0	**	0	0	8	1	-1
4.	0	-1	0	0	0	0	0	0	1	9	2	-1
5.	0	0	-1	+1	-1	0	**	+1	0	8	4	0
6.	0	0	0	+1	-1	0	**	-1	0	8	3	-1
7.	0	0	0	-1	0	0	0	-1	0	9	2	0
8.	+1	0	+1	+1	0	0	**	-1	1	8	5	+2
9.	0	0	0	0	-1	0	**	0	0	8	1	-1
10.	0	0	0	+1	0	0	**	+1	0	8	2	+2
11.	0	0	0	+1	0	0	**	-1	0	8	2	0
12.	0	0	0	-1	0	0	-1	0	0	9	2	-2
13.	0	+1	-1	+1	0	1	**	+1	0	8	5	+2
14.	0	0	0	0	0	0	**	0	0	8	0	0
15.	-1	0	0	0	-1	0	+1	0	0	9	3	+1
16.	0	0	0	0	-1	0	**	-1	1	8	3	-2
17.	0	0	-1	+1	+1	0	**	+1	1	8	5	+2
18.	0	0	0	0	0	0	+1	+1	0	9	2	+2
19.	0	0	-1	+1	0	0	+1	+1	1	9	5	+2
20.	0	0	0	0	0	0	**	0	0	8	0	0
21.	0	+1	0	0	0	0	0	0	0	9	1	+1
22.	0	0	0	-1	+1	0	**	+1	0	8	3	+1
23.	0	0	0	+1	0	0	**	-1	0	8	2	0
24.	0	0	0	0	+1	0	+1	0	0	9	2	+2
25.	0	0	0	0	0	0	**	0	0	8	0	0
26.	0	0	0	+1	0	0	**	0	0	8	1	+1
27.	0	0	0	0	-1	0	-1	+1	1	9	4	-1
28.	0	0	0	0	0	0	**	0	1	8	1	0
29.	0	+1	-1	0	0	1	-1	0	0	9	4	-1
30.	0	0	0	0	0	0	**	0	0	8	0	0
31.	0	-1	0	-1	0	0	-1	+1	0	9	4	-2
32.	0	+1	0	0	0	1	**	+1	0	8	3	+2
33.	0	0	0	0	0	0	+1	-1	1	9	3	0
34.	0	0	0	0	0	0	**	0	0	8	0	0
35.	-1	0	-1	0	0	0	**	+1	0	8	3	-1
36.	0	0	+1	**	0	0	**	+1	0	7	2	+2
37.	0	-1	0	-1	+1	0	**	+1	0	8	3	-1
38.	-1	0	0	0	+1	0	**	+1	0	8	3	+1
39.	0	+1	+1	+2	+1	0	**	+1	0	8	5	+5
40.	0	-1	+1	+1	0	0	**	+1	1	8	5	+2
41.	0	0	0	0	0	0	**	0	0	8	0	0
42.	0	+1	+1	+1	+1	0	-1	+1	0	9	6	+4
43.	-1	0	0	0	-1	1	**	+1	0	8	4	-1
44.	**	+1	**	+1	0	0	**	+1	0	6	3	+3
45.	0	0	0	+1	0	0	**	-1	0	8	2	0
46.	0	0	0	-1	0	0	-1	-1	1	9	4	-1
47.	0	+1	0	+1	0	0	+1	+1	0	9	4	+4
48.	0	+1	0	+1	0	0	**	-1	0	8	3	+1
49.	0	0	0	+1	0	0	**	0	0	8	1	+1
50.	0	+1	-1	-1	0	0	**	-1	0	8	4	-2
51.	0	+1	0	+1	+1	**	-1	+1	0	8	5	+3
52.	0	0	0	-1	**	0	**	0	0	7	1	-1
53.	0	-1	-1	0	0	1	**	+1	0	8	4	-1
54.	0	0	0	-1	0	0	+1	-1	1	9	4	-1
55.	0	0	+1	+1	0	0	**	0	1	8	3	+2
56.	0	0	0	0	-1	0	+1	+1	0	9	3	+1
57	0	0	-1	0	0	0	0	+1	1	9	3	0
58.	0	-1	0	0	0	0	**	0	0	8	1	-1
59.	0	0	0	**	0	1	**	0	0	7	1	0
60.	-1	-1	-1	-1	0	0	**	0	0	8	4	-4
61.	-1	+1	0	+1	0	1	**	-1	0	8	5	0
62.	0	0	0	+1	+1	0	**	+1	1	8	4	+3
63.	0	-1	-1	-1	0	0	**	+1	1	8	5	-2
64.	0	-1	0	-1	-1	0	**	+1	0	8	4	-2
65.	0	+1	0	0	-1	0	**	-1	1	8	4	0
66.	0	0	0	0	0	1	**	0	0	8	1	0
67.	0	0	0	0	0	1	**	0	0	8	1	0
68.	0	0	0	0	-1	0	**	0	0	8	0	0
69.	-1	-1	-1	-1	-1	0	-1	+1	1	9	5	-2
70.	0	0	0	+1	+1	0	-1	+1	0	9	7	-5
71.	0	+1	0	+1	0	0	+1	0	1	9	4	+3
72.	0	0	0	-1	0	0	**	+1	0	8	3	+3
73.	0	0	0	+1	0	0	**	+1	0	8	2	0
74.	+1	+1	+1	+1	0	1	**	0	1	8	3	+1
75.	-1	0	0	-1	0	0	-1	+1	0	9	6	+4
76.	0	-1	+1	+1	0	1	**	-1	1	8	5	-3
												+4